

ABSTRACT

A new internal combustion engine in which combustion originates within the cylinder head between a positive displacement compressor and an intake valve sealing the reciprocating means from the compressor outlet. At approximately TDC fuel is injected into cylinder head combustion passages initiating combustion and the camshaft and combustion force opens the valve. The opening valve allows the burning fuel mixture to flow to the piston forcing the piston towards BDC. The compressor is crankshaft driven and the compressor continues to force air into the cylinder head combustion passages increasing engine torque. Exhaust valves located in the cylinder head are opened near BDC by the camshaft as the valve closes. The piston forces the exhaust gases out the open exhaust ports as it returns to TDC simulating a internal combustion engine four cycle exhaust stroke.

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A new [two-cycle] internal combustion engine in which combustion originates within the cylinder head between a positive displacement [gear type air] compressor and an intake valve sealing the [cylinder] reciprocating means from the compressor outlet. At approximately TDC fuel is injected into the cylinder head combustion passages initiating combustion and the camshaft and combustion force opens the [intake] valve. The opening intake valve allows the burning fuel mixture to flow [in]to the [cylinder] piston forcing the piston towards BDC. The compressor is crankshaft driven and continues to force air into the cylinder head combustion passages [while the engine runs which causes the fuel to burn more rapidly] increasing engine torque. Exhaust valves located in the cylinder head are opened at BDC by the camshaft as the intake valve closes. The piston forces [all] the exhaust gases [held within the cylinder] out the open exhaust ports as it returns to TDC [providing this two-cycle engine an exhaust cycle essentially the same as found in a conventional] four-cycle simulating a internal combustion [piston] engine four cycle exhaust stroke.